

REMARKS

In the non-final Office Action, the Examiner asserts that claims 46-69 are not entitled to the benefit of the filing date of U.S. Patent Application No. 09/335,947 and the filing date of U.S. Provisional Patent Application No. 60/090,028; objects to the specification; objects to the drawings; rejects claims 65-69 under 35 U.S.C. § 101 as directed to non-statutory subject matter; rejects claims 46, 53, and 59 under 35 U.S.C. § 103(a) as unpatentable over PIERSON (U.S. Patent No. 6,487,198) in view of NOH (U.S. Patent No. 6,134,238); rejects claim 47 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of NOH, and further in view of KREMER (U.S. Patent No. 5,278,824); rejects claims 48, 54, and 60 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of NOH, and further in view of VOGEL (U.S. Patent No. 6,075,788); rejects claims 49-52, 55-58, and 61-64 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of NOH, and further in view of SCHMIDT (U.S. Patent No. 6,205,154); rejects claim 65 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of STEPHENSON (U.S. Patent No. 5,081,654); rejects claim 66 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of STEPHENSON, and further in view of KREMER; and rejects claims 67-69 under 35 U.S.C. § 103(a) as unpatentable over PIERSON in view of STEPHENSON, and further in view of SCHMIDT. Applicants respectfully traverse these objections and rejections.

By way of the present Amendment, Applicants amend claims 47-52, 54-58, and 60-69 to improve form. No new matter has been added by way of this Amendment. Claims 46-69 remain pending.

Assertion regarding claim for priority

The Examiner alleges that claims 46-69 are not entitled to the benefit of U.S. Patent Application No. 09/335,947 and the filing date of U.S. Provisional Patent Application No. 60/090,028. In particular, the Examiner alleges that the provisional application does not provide support for a link sending or receiving channelized data tributary streams that carry both Packet over SONET and ATM over SONET in tributary streams together simultaneously (non-final Office Action, p. 2). Applicants disagree.

In response to similar allegations by the Examiner in the non-final Office Action, dated June 2, 2009 ("previous non-final Office Action"), Applicants again initially note that claim 46, for example, recites tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, not packet over SONET and ATM over SONET, as alleged by the Examiner. Nevertheless, Applicants again direct the Examiner's attention to, for example, page 183 of U.S. Provisional Application No. 60/090,028, which specifically depicts a channelized SONET/SDH including Packet over SONET tributary streams and ATM tributary streams. In this regard, Applicants note that, at page 183 of the provisional application, POS refers to packet over SONET, as defined, for example, at p. 167 of the provisional application.

At the very least, Applicants respectfully submit that claims 46-69 are fully supported by the original disclosure (of U.S. Patent No. 6,658,021 (U.S. Patent Application No. 09/335,947 filed June 18, 1999)), for example, at p. 9, line 23 to p. 10, line 5, p.11, line 29 to p. 12, line 14, and Figs. 3 and 7. Accordingly, claims 46-69 are entitled to, at the very least, the benefit of the filing date of U.S. Patent No. 6,658,021 (U.S. Patent Application No. 09/335,947 filed June 18, 1999).

Moreover, Applicants note that the drawing on page 183 of the provisional application corresponds to Fig. 3 of the original disclosure. Applicants refer the Examiner to p. 9, line 23 to p. 10, line 5, which describe Fig. 3, and defines POS as Packet over SONET.

Further with respect to the assertion regarding claim for priority, in the Response to Amendment section, the Examiner alleges:

On Pg 184 of the provisional application the virtual shows a big circle with a small circle with POS in the small circle. POS is not defined and there is no mention of tributary. No where in the drawing does applicant define tributary. No where in the drawing is POS defined as packet over SONET. No where in the drawing is simultaneous defined for sending both ATM in a tributary and packet over SONET in a tributary.

(non-final Office Action, p. 14). Applicants respectfully disagree.

Applicants respectfully submit that one skilled in the art would readily appreciate that POS, as disclosed at page 183 of the provisional application, refers to packet over SONET, and that the “big circle with a small circle with POS in the small circle” referred to by the Examiner, corresponds to a stream (OC48c stream as disclosed, for example, at page 183 of the provisional application) in a tributary configuration that includes multiple tributaries (for example, one tributary includes a packet over SONET (POS) tributary and an ATM tributary). Moreover, Applicants refer the Examiner to pages 167-170 of the provisional application (referring to page 183 of the provisional application) for further clarification. Furthermore, Applicants are unaware of any requirement that the drawings provide a definition of every word used in the claims. If the Examiner maintains this position, Applicants respectfully request that the Examiner provide support (e.g., in the patent rules) where Applicants are required to provide, in the drawings, a definition of every word used in the claims. Accordingly, Applicants submit that the provisional application provides full support for the pending claims.

Further with respect to the assertion regarding claim for priority, in the Response to Amendment section, the Examiner alleges:

The words simultaneous, tributaries, and packet over SONET are never explained or defined on Pg 184 of the provisional application; therefore, applicant argument is not persuasive.

The examiner asserts that the because POS is never defined as packet over SONET and tributaries are never defined and simultaneous tributaries are never defined in the Figure that the applicant is not entitled to provisional application priority date for the limitation of "separate the channelized SONET data streams into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET tributary data stream and an asynchronous transfer mode tributary data stream[.]

(non-final Office Action, p. 15). Applicants respectfully disagree.

As mentioned above, Applicants refer the Examiner to pages 167-170 of the provisional application.

The Examiner further alleges that "[in] order to be a division of the parent the specification needs to be virtually the same" (non-final Office Action, p. 14). Applicants note that the Examiner's allegation is addressed below with respect to the objection to the specification.

For at least the foregoing reasons, Applicants submit that the Examiner's allegation regarding priority lacks merit. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the assertion that claims 46-69 are not entitled to the benefit of the filing date of U.S. Provisional Application No. 60/090,028.

Objection to the Specification

The specification stands objected to for allegedly containing informalities. Applicants respectfully traverse this objection.

More particularly, the Examiner alleges:

The examiner objects to the section of the specification in which the status of related applications are described because the applicant has stated that this application is a division of Patent 6,658,021 where the applicant has clearly amended the specification to add new matter which was previously not described in the parent application making this clearly a Continuation in part.

(non-final Office Action, p. 12). Applicants respectfully disagree.

In response to similar allegations by the Examiner in the previous non-final Office Action, Applicants submit again that the amendment to the specification in the Preliminary Amendment filed September 17, 2003 ("September 2003 Amendment"), does not add new matter. The subject matter in the September 2003 Amendment is fully supported by the original disclosure (of U.S. Patent No. 6,658,021), for example, at p. 9, line 23 to p. 10, line 5, p.11, line 29 to p. 12, line 14, and Figs. 3 and 7. Accordingly, Applicants respectfully submit that the amendment to the specification in the September 2003 Amendment does not add new matter, and that the present application is clearly a division of U.S. Patent No. 6,658,021.

The Examiner further alleges:

The specification is further objected to because the applicant has claimed priority to the provisional specification again where the applicant has clearly added new matter and therefore is not entitled to the original priority date.

(non-final Office Action, pp. 12-13). Applicants disagree.

In response to similar allegations by the Examiner in the previous non-final Office Action, Applicants submit that the amendment to the specification, in the September 2003 Amendment, does not add new matter. The subject matter in the September 2003 Amendment is fully supported by the provisional application. For example, page 183 of the provisional application discloses a channelized SONET data stream including packet over SONET (POS) tributary data streams and asynchronous transfer mode (ATM) tributary data streams. Moreover, Applicants refer the Examiner to pages 167-170 of the provisional application which refers to a hybrid ATM-IP architecture. Accordingly, Applicants respectfully submit that the amendment to

the specification in the September 2003 Amendment does not add new matter, and that the present application is therefore entitled to the original priority date of the provisional application (U.S. Patent Application No. 60/090,028).

Further with respect to the objection to the specification, in the Response to Amendment section, the Examiner alleges:

In order to be a division of the parent the specification needs to be virtually the same. The specification in the instant application appears to be different from the parent application. The examiner is confused as to why the applicant would argue that portions of pages in the parent patent provided support for certain sections. The examiner asserts that because the applicant has not proven that the specification in the instant application is not virtually the same as the parent patent application that the applicant has failed the burden of proof that the instant application is a division.

(non-final Office Action, p. 14). Applicants respectfully disagree.

At the outset, Applicants respectfully request that the Examiner identify the section(s) in the M.P.E.P. or in the statutes that requires “that the specification in the instant application [be] ... virtually the same as the parent patent application,” as alleged by the Examiner. Applicants respectfully submit that, as the Examiner has not identified any section(s) in the M.P.E.P. or in the statutes that require that the specification of the instant application and the specification of the parent patent application be “virtually the same.” Applicants respectfully submit that the threshold is new matter. In this case, the summary section of the present application, which the Examiner appears to be referring to, corresponds to the pending claims in a sentence format. Applicants respectfully submit again that pp. 9-11 and Figs. 3 and 7 of the original disclosure (of U.S. Patent No. 6,658,021) fully support the pending claims. Therefore, no new matter was added by way of the September 2003 Amendment. Accordingly, although the present application and the parent application may not be “virtually the same,” as alleged by the Examiner, Applicants respectfully submit that that the present application is clearly a division of

U.S. Patent No. 6,658,021 because no new matter was added by way of the September 2003 Amendment. Moreover, it is unclear why "portions of pages" of the original disclosure (of U.S. Patent No. 6,658,021) would not provide support for "certain sections," contrary to the Examiner's allegation. Applicants are not aware of any requirement to the contrary.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection of the specification.

Objection to the Drawings

The drawings stand objected to for allegedly not showing every feature of the claimed invention. Applicants respectfully traverse this objection.

In particular, the Examiner alleges:

Applicant's best drawing relative to this application shows a SONET MUX/DEMUX and Line card in Fig 4; however, none of the applicant drawings show the following: "channelized SONET data stream and tributary data streams simultaneously including packet over SONET tributary data stream and ATM tributary data" as specified in claim 46; "simultaneously receiving tributary data streams including packet over SONET and ATM tributary streams" and "combining the simultaneously received tributary data streams into a single SONET data stream" as specified in claim 53; "means for creating at least one simultaneous tributary synchronous optical network data streams including: packet over SONET tributary data stream an ATM tributary data stream" as specified in claim 59; and "constructing of packet over SONET" constructing of ATM data stream, and combining the packet over SONET and ATM data stream into a single channelized SONET data stream" as specified in claim 65.

(non-final Office Action, pp. 13-14). Applicants respectfully disagree.

In response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants direct the Examiner's attention to, for example, Figs. 3 and 7, of the present application, which disclose the channelized SONET data stream separated into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 46, a multiplexer configured to simultaneously receive tributary data streams

including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 53, means for creating at least two simultaneous tributary synchronous optical network (SONET) data streams, the at least two simultaneous tributary SONET data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 59, and constructing a packet over synchronous optical network (POS) data stream; constructing an asynchronous transfer mode (ATM) data stream; combining the POS data stream and the ATM data stream into a single channelized synchronous optical network (SONET) data stream, as recited in claim 65.

Further with respect to the objection to the specification, in the Response to Amendment section, the Examiner alleges:

Figures 3 and 7 are independent drawings. No where on either drawing is it stated that the POS and ATM simultaneously sent in two tributaries; consequently, applicant argument is not persuasive.

(non-final Office Action, p. 14). Applicants respectfully disagree.

Without acquiescing in the Examiner's allegation that "Figures 3 and 7 are independent drawings," Applicants respectfully submit again that Figs. 3 and 7 provide full support for the pending claims. Fig. 3 depicts, for example, a channelized SONET data stream (OC-48 input stream 30) that is separated into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream (e.g., packet over SONET tributary 32), and an asynchronous transfer mode (ATM) tributary data stream (e.g., OC-12 ATM tributary 34), as disclosed, for example, at p. 9, line 23 to p. 10, line 5 of the original disclosure.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection of the drawings.

Rejection under 35 U.S.C. § 101

Claims 65-69 stand rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter. Applicants respectfully traverse.

While not acquiescing in this rejection, but merely to expedite prosecution, Applicants amend claim 65 to address the Examiner's concerns. Claim 65 is, therefore, directed to statutory subject matter. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 65 under 35 U.S.C. § 101.

Claims 66-69 depend from claim 65. Therefore, claims 66-69 are directed to statutory subject matter for at least reasons given above with respect to claim 65. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 66-69 under 35 U.S.C. § 101.

Rejection under 35 U.S.C. § 103(a) based on PIERSON and NOH

Claims 46, 53, and 59 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON and NOH. Applicants respectfully traverse this rejection.

Independent claim 46 is directed to a device comprising a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream; and a line card coupled to the demultiplexer and configured to provide the demultiplexer with the channelized SONET data stream. PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest one or more of these features.

For example, PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest a demultiplexer to separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. The Examiner admits that PIERSON does not disclose “separate the channelized synchronous optical data stream into a constituent tributary data stream and configured to provide the demultiplex with the channelized SONET data stream” and relies on col. 5, line 65 to col. 6, line 19, and col. 6, line 63 to col. 7, line 5, of NOH for allegedly disclosing “separate the channelized synchronous optical data stream into a constituent tributary data stream” (non-final Office Action, p. 3). In response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants respectfully disagree with the Examiner’s interpretation of NOH.

Initially, and in response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants note that claim 46 does not recite “separate the channelized synchronous optical data stream into a constituent tributary data stream” as alleged by the Examiner (non-final Office Action, p. 4). Claim 46 actually recites “separate the channelized SONET data stream into constituent tributary data streams” (emphasis added).

Nevertheless, at col. 5, line 65 to col. 6, line 19, NOH discloses:

The inevitability of a pure ATM transport option is shown and now described with reference to FIG. 6(a). As shown in FIG. 6(a), the NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. STM traffic is circuit emulated (if necessary) into ATM cells to maximize the bandwidth utilization of a given SDH (SONET) pipe by using ATM technologies. The single tributary VC4 indicated as element 53 in the STM-1 pipe is utilized for ATM traffic under ATM management only as indicated as element 50. Switching of ATM traffic will be provided by the ATM Fabric 85. This pure ATM scheme having only ATM cross-connect may be deficient in the respect that pure STM

traffic has to be terminated at every node which may introduce greater delay and processing overhead.

As shown in FIG. 6(b), as ATM traffic demands increase, the transport option in the transport access network will be changed to pure ATM transport with a single SDH (SONET) tributary such as STM-1 and STM-4c, as indicated as element 53. The ATM traffic in the single SDH (SONET) tributary will be terminated at the junction network for grooming at the ATM layer. STM broadband path 52 applications still play an important role as a container for the ATM traffic.

This section of NOH discloses a pure ATM transport option in which an NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. This section of NOH does not disclose or suggest separating the channelized synchronous optical data stream into a constituent tributary data stream, as alleged by the Examiner. NOH does not disclose that the NE 38 carries ATM and STM traffic as ATM cells in SDH (SONET) tributaries, as would be required of NOH based on the Examiner's interpretation of claim 46. In stark contrast, this section NOH specifically discloses a pure ATM transport option in which an NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. As such, NOH does not and cannot disclose or suggest separating the ATM and STM traffic as ATM cells in a single SDH (SONET) tributary because this section of NOH discloses only one single tributary. Even if, for the sake of argument, this section of NOH did disclose "separate the channelized synchronous optical data stream into a constituent tributary data stream," as alleged by the Examiner, a point that Applicants do not concede, this section of NOH does not disclose or suggest separate the channelized SONET data stream into constituent tributary data streams, let alone a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS)

tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 46.

At col. 6, line 63 to col. 7, line 5, NOH discloses:

As shown in FIG. 7(b), by replacing the STM cross-connect system with an ATM VP cross-connect system 85, the inflexibility issue associated with the boundary of the VC3 tributaries is resolved as customer AB and AC can now share the same VC3 to transport their ATM traffic.

As ATM traffic demands increase, the transport option in the transport access network will be changed to pure ATM transport with a single SDH (SONET) path. FIG. 7(c) shows that bandwidth utilization can be maximized by using a single tributary, e.g., VC4, with no barrier to surplus capacity.

This section of NOH discloses replacing an STM cross-connect system with an ATM VP cross-connect to allow customers AB and AC to share VC3 to transport their ATM traffic. This section of NOH further discloses changing the transport access network to pure ATM transport using a single tributary. NOH does not disclose or suggest that the ATM VP cross-connect receives a channelized SONET data stream and that the ATM VP cross-connect separates the VC3s into constituent tributary data streams, as would be required of NOH based on the Examiner's interpretation of claim 46. Moreover, this section of NOH does not disclose or suggest that the VC3s include a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. Accordingly, this section of NOH does not disclose or suggest a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 46.

Further with respect to the above feature of claim 46, in the Response to Amendment section, the Examiner alleges:

The applicant has not claimed that the POS tributary data stream and the ATM tributary data stream are two separate and independent tributary data streams which one tributary data stream only contains ATM and another tributary data stream contains POS.

The limitation of "separate the channelized synchronous optical data stream into a constituent tributary data stream" does not require in the broadest interpretation that the POS and the ATM are in two independent tributaries and are separated. The claim only requires that the data in the channelized SONET in VCs be separated. Clearly the reference NOH performs this limitation.

(non-final Office Action, pp. 15-16). Applicants respectfully disagree.

Initially, and in response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants note that claim 46 does not recite "separate the channelized synchronous optical data stream into a constituent tributary data stream," as alleged by the Examiner (emphasis added). Without acquiescing the Examiner's allegation, Applicants note that claim 46 recites, *inter alia*, a device comprising a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream (emphasis added). Moreover, Applicants respectfully submit that it is unclear how one skilled in the art would reasonably interpret the POS tributary data stream, as recited in claim 46, as containing ATM data, and the ATM tributary data stream, as recited in claim 46, as containing POS data, contrary to the Examiner's allegation. Accordingly, and as explained above, PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest the above feature of claim 46.

Further with respect to the above feature of claim 46, in the Response to Amendment section, the Examiner alleges:

The examiner disagrees with the applicant argument that the reference NOH need to teach: separating the ATM and STM traffic into separate and independent tributaries because applicant has not claimed this limitation. Pierson teaches: both ATM and Packet over SONET are in a SONET frame and NOH teaches the data can be inserted into VCs for more efficient utilization of bandwidth; therefore, the combination of reference teach the claimed invention. Clearly when the VC are demultiplexed then the POS and ATM are simultaneously received.

(non-final Office Action, p. 16). Without acquiescing in the Examiner's allegation, Applicants note that Applicants' remarks, in the response, dated August 31, 2009, to the previous non-final Office Action, did mention anything about NOH needing "to teach separating the ATM and STM traffic into separate and independent tributaries." Moreover, claim 46 does not recite that "when the VC are demultiplexed then the POS and ATM are simultaneously received." Thus, the Examiner's allegation is irrelevant with respect to claim 46. Furthermore, the sections of PIERSON, cited by the Examiner, do not disclose tributary data streams that include a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. Accordingly, Applicants respectfully submit that PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 46.

Further with respect to the above feature of claim 46, in the Response to Amendment section, the Examiner alleges:

The examiner disagrees with the applicant's argument that the reference NOH needs to teach a demultiplexer configured to receive a channelized synchronous optical network data stream and separate the channelized SONET data stream into constituent tributary data streams the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream and a synchronous transfer mode (ATM) tributary because the combination of reference teach this limitation.

The examiner respectfully disagrees with the applicant argument that the combination of reference do not teach: simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream. Again it should be noted that the applicant has not claimed that the POS tributary data stream and the ATM tributary data stream are two separate and independent data streams in which one tributary only carries POS and the other independent tributary carries only ATM.

(non-final Office Action, pp. 16-17). Without acquiescing in the Examiner's allegation, and in response to similar allegations by the Examiner, Applicants respectfully submit that PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest a demultiplexer configured to receive a channelized synchronous optical network (SONET) data stream and separate the channelized SONET data stream into constituent tributary data streams, the tributary data streams simultaneously including a packet over SONET (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as recited in claim 46. Moreover, Applicants again respectfully submit that it is unclear how one skilled in the art would reasonably interpret the POS tributary data stream, as recited in claim 46, as containing ATM data, and the ATM tributary data stream, as recited in claim 46, as containing POS data, contrary to the Examiner's allegation.

For at least the foregoing reasons, Applicants submit that claim 46 is patentable over PIERSON and NOH. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 46 under 35 U.S.C. § 103(a) based on PIERSON and NOH.

Independent claims 53 and 59 recite features similar to (yet possibly of different scope than) features described above with respect to claim 46. Therefore, Applicants submit that claims 53 and 59 are patentable over PIERSON and NOH, whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claim 46. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 53 and 59 under 35 U.S.C. § 103(a) based on PIERSON and NOH. Moreover, these claims are patentable over PIERSON and NOH, whether taken alone or in any reasonable combination, for reasons of their own.

For example, PIERSON and NOH, whether taken alone or in any reasonable combination, do not disclose or suggest a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, the multiplexer being further configured to combine the simultaneously received tributary data streams into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53. Although the Examiner alleges that PIERSON, at Fig. 6 and col. 12, lines 50-67, discloses “[a] multiplexer configured to simultaneously received a packet over synchronous optical network (POS) data stream and a asynchronous transfer mode data stream,” the Examiner admits that PIERSON does not disclose “[combining] the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream” and relies on col. 6, lines 20-62, and col. 5, line 54 to col. 6, line 19, of NOH for allegedly disclosing “[combining] the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream” (non-final Office Action, p. 4). In response to similar allegations made

by the Examiner in the previous non-final Office Action, Applicants respectfully disagree with the Examiner's interpretation of PIERSON and NOH.

Fig. 6 of PIERSON depicts a Data Terminating Equipment (DTE) operation in a process of unloading T1 payloads from ATM cells. Fig. 6 of PIERSON does not disclose that the ATM cells, formed by ATM transmitter 675 and sent to SONET transmitter 685, are transmitted via tributary data streams, let alone that the SONET transmitter 685 receives the formed ATM cells via tributary systems that include a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as would be required of PIERSON based on the Examiner's interpretation of claim 53. In fact, Fig. 6 of PIERSON discloses that the ATM cells are transmitted to the SONET transmitter 685 via one single medium, and not via tributary streams that include a packet over synchronous optical network (POS) data stream and a asynchronous transfer mode data stream, as alleged by the Examiner. Accordingly, this section of PIERSON does not disclose a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, and accordingly cannot disclose that the multiplexer is further configured to combine the simultaneously received tributary data streams into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53.

At col. 12, lines 50-67, PIERSON discloses:

ATM transmitter 675 forms outgoing ATM cells by packaging two T1 frames in each ATM cell. As discussed earlier, each ATM cell payload typically carries two T1 payloads, except in fractional T1 link situations. The frame bit for each T1 payload replaces a bit in the ATM cell header. If the T1 frames are in the ESF format, overhead controller 680 may submit an overhead status message to ATM transmitter 675. ATM transmitter 675 inserts the overhead status message in the DL channel of the outgoing ESF frame bits carried in the ATM cell header. ATM transmitter 675 sends the outgoing ATM cells to SONET transmitter 685.

SONET transmitter 685 forms SONET signal 686 by packaging outgoing ATM cells inside SONET frames. SONET transmitter 685 sends SONET signal 686 to DTE 104 over ATM network 101. Packaging ATM cells in SONET frames and forming SONET signal 686 are well known to those skilled in the art and need not be described in further detail.

This section of PIERSON discloses that an ATM 675 forms outgoing ATM cells, by packaging two T1 frames in each ATM cell, and sends the ATM cells to a SONET transmitter 685.

However, contrary to the Examiner's allegation, this section of PIERSON does not disclose that the ATM cells, formed by ATM transmitter 675 and sent to SONET transmitter 685, are transmitted via tributary data streams, let alone that the SONET transmitter 685 receives the formed ATM cells via tributary systems, including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as would be required of PIERSON based on the Examiner's interpretation of claim 53.

Accordingly, this section of PIERSON does not disclose a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, and accordingly cannot disclose that the multiplexer is further configured to combine the simultaneously received tributary data streams into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53.

Applicants respectfully submit that NOH does not remedy the deficiencies in the disclosure of PIERSON with respect to claim 53. Nevertheless, at col. 6, lines 20-62, NOH discloses:

To illustrate the operations of each layer management, a non-limiting example network model having three ATM Switch (ATM-SW) nodes, is now considered. As illustrated in FIG. 7(a), an STM cross-connect system 30 interconnects the three ATM Switch (ATM-SW) nodes labeled ATM-SW A,B and C for the bandwidth management with, e.g., STM-1 physical links provided between the STM cross-connect system 30 and ATM-SWs. In the example, the model network

accommodates two types of services, e.g., class 1 and class 2 service with no spare capacity being reserved for the network protection. In the example, the class 1 is a video service that is coded at 10 Mb/s with the transport being rate-controlled at 10 Mb/s and the class 2 traffic is 10 Mb/s native LAN traffic. Each service class is assigned to different VPs for the segregation of different QoS requirements. The network management system is located at an administrative center that communicates with the ATM-SWs to collect the data of existing demands, from which the required bandwidth for the forecast demands is calculated as described for instance in the reference entitled "Medium-Term Centralized Virtual-Path Bandwidth Control Based on Traffic Measurements," *IEEE Transactions on Communications*, Vol. 43, No. 10, October 1995 to M. Logothetis, Michael and S. Shioda, the contents and disclosure of which are incorporated by reference as if fully set forth herein.

FIG. 7(a) shows an initial configuration of this model that provides the capability of the layer 1 management. Customer AB transports three class 1 and three class 2 services between the switch pair A and B and customer AC and BC transport two class 1 and two class 2 services between the switch pair A and C, B and C, respectively. Thus customer AB requires two VC3s. Surplus bandwidth on each VC3 is about 8 Mb/s and 28 Mb/s respectively, since a VC3 provides a customer an available bit rate of 48 Mb/s. The customers BC and AC would require a VC3 with 8 Mb/s surplus bandwidth.

When the forecast traffic demands change, e.g., as customer AB stops subscribing to a class 1 service and the customer AC wishes to transport two more class 2 services, customer AC can not simply use the surplus bandwidth on a VC3 between the ATM-SW A and the STM cross-connect system that handles VC3 cross-connects due to the boundary of the VC3 tributaries. This clearly leads to inefficient bandwidth utilization.

This section of NOH discloses that an STM cross-connect system 30 interconnects the three ATM Switch nodes with STM-1 physical links for bandwidth management. This section does not disclose or suggest that the VC3s are combined into a single channelized SONET data stream, as would be required of NOH based on the Examiner's interpretation of claim 53. In fact, although NOH discloses that three VC3s are connected to STM-1, NOH appears to teach away from this feature by disclosing that three separate outputs proceed from the STM-1, not a single channelized SONET data stream (see, for example, Fig. 7A of NOH). Moreover, this section of NOH does not disclose or suggest that the STM-1 is a multiplexer or that the outputs

proceeding from the STM-1 are synchronous optical network (SONET) data streams.

Accordingly, this section of NOH does not disclose or suggest the multiplexer being further configured to combine the simultaneously received tributary data streams (including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream) into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53. Additionally, this section of NOH discloses that this configuration of NOH is clearly inefficient.

At col. 5, line 54 to col. 6, line 19, NOH discloses:

The concatenated mode of SDH (SONET) tributaries such as VC-4-nC provides a container for ATM traffic. For some applications in ATM networks where the bandwidth reallocation unit for traffic demand is VC3/VC-4-nC, switching entire VC3/VC-4-nC ATM containers is more desirable than switching individual ATM cells. The high-speed transport network with multiple ring interconnections is an example in the ATM/STM hybrid network. The interconnected ring networks can be dynamically reconfigured by adding or dropping the entire VC3/VC-4-nC tributaries. SDH (SONET) will be terminated only when grooming at the ATM layer is needed.

The inevitability of a pure ATM transport option is shown and now described with reference to FIG. 6(a). As shown in FIG. 6(a), the NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. STM traffic is circuit emulated (if necessary) into ATM cells to maximize the bandwidth utilization of a given SDH (SONET) pipe by using ATM technologies. The single tributary VC4 indicated as element 53 in the STM-1 pipe is utilized for ATM traffic under ATM management only as indicated as element 50. Switching of ATM traffic will be provided by the ATM Fabric 85. This pure ATM scheme having only ATM cross-connect may be deficient in the respect that pure STM traffic has to be terminated at every node which may introduce greater delay and processing overhead.

As shown in FIG. 6(b), as ATM traffic demands increase, the transport option in the transport access network will be changed to pure ATM transport with a single SDH (SONET) tributary such as STM-1 and STM-4c, as indicated as element 53. The ATM traffic in the single SDH (SONET) tributary will be terminated at the junction network for grooming at the ATM layer.

STM broadband path 52 applications still play an important role as a container for the ATM traffic.

This section of NOH discloses that a concatenated mode of SDH (SONET) tributaries such as VC-4-nC provides a container for ATM traffic. With regard to a separate and distinct embodiment, this section of NOH further discloses a pure ATM transport option in which an NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. However, this section of NOH does not disclose or suggest the multiplexer being further configured to combine the simultaneously received tributary data streams (a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53. This section of NOH merely discloses a concatenated mode of SDH (SONET) tributaries but is silent as to whether the concatenated mode includes a multiplexer. Furthermore, this section of NOH does not disclose or suggest that the tributaries of the concatenated mode includes a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as would be required of NOH based on the Examiner's interpretation of claim 53. Moreover, this section of NOH does not disclose or suggest that the NE 38 carries all ATM and STM traffic as ATM cells in SDH (SONET) tributary data streams.

The Examiner further alleges that NOH discloses that the "three VC3 or tributary streams which are simultaneously concatenated to create a single STM-1 or SONET single data stream" (non-final Office Action, p. 4). Applicants respectfully disagree with the Examiner's allegation.

In response to similar allegations made by the Examiner in the previous non-final Office Action, NOH actually refers to VC-4-nC when disclosing a concatenated mode, and not VC3

(see, for example, col. 5, lines 53-54 of NOH). In this regard, NOH appears to refer to Fig. 7(c) which depicts three VC4s that are connected to an STM1-1, where one VC4 is connected to each STM-1. Accordingly, the Examiner appears to confuse two different and distinct embodiments of NOH.

Therefore, even if PIERSON were combined with NOH, such a combination could not fairly be construed to disclose or suggest a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, the multiplexer being further configured to combine the simultaneously received tributary data streams into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53. Further, even if for the sake of argument, the combination of PIERSON and NOH could fairly be construed to disclose each of the features of claim 53, a point that Applicants do not concede, Applicants assert that the reasons for combining PIERSON and NOH do not satisfy the requirements of 35 U.S.C. § 103.

For example, with respect to the reasons for combining PIERSON and NOH, the Examiner alleges (non-final Office Action, p. 4):

It would have been obvious to one of ordinary skill in the art at the time of the invention to add combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream of Noh to the processing of SONET transmitter of Pierson because by processing ATM cells with in VC the bandwidth utilized in transmitting and receiving the data is more efficiently utilized which will result in an improved performance.

In response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants submit that the Examiner's allegation is merely a conclusory statement of an alleged benefit of the combination. Such conclusory statements have been repeatedly held to be insufficient for establishing a *prima facie* case of obviousness. In this respect, Applicants rely

upon KSR International Co. v. Teleflex Inc., 550 U.S. 398 (April 30, 2007) (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)), where it was held that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

Furthermore, the Examiner's allegation does not explain why one skilled in the art would change the very operation of the DTE of PIERSON to include the system of NOH. NOH specifically disclose that the configuration (Fig. 7A), relied on by the Examiner for allegedly disclosing combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream, is clearly inefficient (col. 6, lines 61-62 of NOH). Therefore, one of ordinary skill in the art would not modify the very operation of the DTE of PIERSON to include the inefficient configuration of NOH. Moreover, the Examiner provides no explanation as to how such a modified system, if modifiable, would even operate. The Examiner's allegations fall short of providing the articulated reasoning required by KSR. Accordingly, the Examiner has not met the initial burden of establishing a *prima facie* case of obviousness with respect to claim 53.

Further with respect to the above feature of claim 53, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the applicant's argument Pierson teaches away from the claimed invention because Pierson does not teach the whole claim limitation of 53. Applicant has failed the burden of providing specific evidence to the fact. More specifically the examiner disagrees that because Pierson teaches an ATM containing both Tls and HDLC which is converted into SONET that the this teaches away from the claimed invention. Noh teaches: combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream (Fig 7A shows three VC3 or tributary streams which are simultaneously concatenated to create a single STM-1 or SONET single data stream per col. 6 lines 20 to 62 and col. 5 lie 54 to col. 6 line 19).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream of Noh to the processing of SONET transmitter of Pierson because by processing ATM cells with in VC the bandwidth utilized in transmitting and receiving the data is more efficiently utilized which will result in an improved performance.

(non-final Office Action, pp. 17-18). Without acquiescing in the Examiner's allegation, Applicants respectfully submit that the section of PIERSON, cited by the Examiner, discloses that the ATM cells are transmitted to the SONET transmitter 685 via one single medium, and not via tributary streams that include a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream. Accordingly, contrary to the Examiner's allegation, this section of PIERSON does not disclose a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. NOH does not remedy the above deficiencies in the disclosure of PIERSON. NOH merely discloses that the three VC3s are connected to STM-1 and that three separate outputs proceed from the STM-1, not a single channelized SONET data stream. Accordingly, any reasonable combination of PIERSON and NOH cannot reasonably be construed as disclosing or suggesting a multiplexer being further configured to combine simultaneously received tributary data streams (including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream) into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53.

Further with respect to the above feature of claim 53, in the Response to Amendment section, the Examiner alleges:

Applicant goes on to state that the second reference Noh does not remedy the fact that Pierson teaches away from the claimed invention because Pierson does not teach: single channelized SONET data stream. Clearly the primary reference, Pierson, taught SONET with ATM and POS and the Noh teaches: demuxing VC3 with both ATM and POS which are multiplexed and further configured into a single channelized synchronous optical network SONET data stream or the claimed invention.

(non-final Office Action, p. 18). Without acquiescing in the Examiner's allegation, Applicants respectfully submit that in the response to the previous non-final Office Action, Applicants indicated that NOH does not disclose a single channelized SONET data stream. Instead, NOH discloses that the three VC3s are connected to STM-1 and that three separate outputs proceed from the STM-1, not a single channelized SONET data stream (Figs. 7A-C of NOH). Moreover, the sections of PIERSON, cited by the Examiner, do not disclose tributary data streams that include a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. Accordingly, any reasonable combination of PIERSON and NOH cannot disclose or suggest a multiplexer configured to simultaneously receive tributary data streams including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, the multiplexer being further configured to combine the simultaneously received tributary data streams into a single channelized synchronous optical network (SONET) data stream, as recited in claim 53.

Further with respect to the above feature of claim 53, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the applicant argument that the implementation of the combination is inefficient is even relevant because efficiency is not part of the claimed limitation. Clearly the combination is not inefficient because the ATM and POS are already in SONET together and per Pierson and Noh breaks the combination into VC3 in order to better utilize the bandwidth request.

The examiner respectfully disagrees with the applicant argument that the rejection is a mere conclusory statement because the examiner has not explained how the two reference are combined and that the combination is inefficient. The examiner has explained in the above rejection how to combine the two reference to implement the claimed invention and the motivation to combine is proper therefore the rejection is not a mere conclusory statement.

(non-final Office Action, p. 18). Applicants respectfully disagree.

NOH specifically discloses that the configuration in Fig. 7A of NOH, relied on by the Examiner for allegedly disclosing combining the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream, is clearly inefficient (col. 6, lines 61-62 of NOH). Applicants respectfully submit that the fact that NOH specifically discloses that the configuration relied on by the Examiner is clearly inefficient is clearly relevant to any alleged motivation to combine PIERSON with NOH. Clearly, one of ordinary skill in the art would not modify the very operation of the DTE of PIERSON to include a configuration that NOH specifically discloses as clearly inefficient. Accordingly, Applicants respectfully submit that the Examiner's allegations with respect to the combination of PIERSON with NOH are mere conclusory statements relying on impermissible hindsight.

For at least the foregoing reasons, Applicants submit that claim 53 is patentable over PIERSON and NOH. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 53 under 35 U.S.C. § 103(a) based on PIERSON and NOH.

PIERSON and NOH, whether taken alone or in any reasonable combination, do not further disclose or suggest, means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream, as recited in claim 59. Although the Examiner alleges that PIERSON, at Fig. 6 and

col. 12, lines 50-67, discloses “means for transmitting a single SONET data stream,” the Examiner admits that PIERSON does not disclose “at least two simultaneous tributary streams in a single SONET data stream” and relies on col. 6, lines 20-62, and col. 5, line 54 to col. 6, line 19, of NOH for allegedly disclosing “at least two simultaneous tributary streams in a single SONET data stream” (non-final Office Action, p. 4). In response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants respectfully disagree with the Examiner’s interpretation of PIERSON and NOH.

At the outset, and in response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants object to the Examiner's piecemeal attempt at reconstructing Applicants' claim 59 and submit that such attempt is insufficient for establishing a *prima facie* case of obviousness with respect to claim 59. Applicants' claim 59 does not recite “means for transmitting a single SONET data stream” and “at least two simultaneous tributary streams in a single SONET data stream,” as the Examiner alleges. Instead, Applicants' claim 59 specifically recites means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream. Instead of addressing this specifically recited feature of claim 59, the Examiner breaks the feature down into illogical portions and points to a section of PIERSON for allegedly disclosing several portions, and an unrelated section of NOH for allegedly disclosing another portion of claim 59. Applicants submit that such attempts at reconstructing Applicants' claims are clearly impermissible.

In this regard, M.P.E.P. § 2106(II)(C) recites, in relevant part:

[W]hen evaluating the scope of a claim, every limitation in the claim must be considered. USPTO personnel may not dissect a claimed invention into

discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered. See, e.g., *Diamond v. Diehr*, 450 U.S. 175, 188-89, 209 USPQ 1, 9 (1981) (“In determining the eligibility of respondents’ claimed process for patent protection under § 101, their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made.”).

Here, Applicants respectfully submit that, instead of considering the claim as a whole, the non-final Office Action has dissected the features of claim 59 into discrete and illogical elements and evaluated the elements in isolation, which is expressly forbidden by the above-cited section of the M.P.E.P. Such attempts at reconstructing Applicants’ claim are clearly impermissible, as set forth in the above-cited section of the M.P.E.P. Nevertheless, Applicants respectfully submit that PIERSON and NOH, whether taken alone or any reasonable combination, do not disclose or suggest the above feature of claim 59.

At col. 6, lines 20-62, reproduced above, NOH discloses that an STM cross-connect system 30 interconnects the three ATM Switch nodes with STM-1 physical links STM-1 for bandwidth management. This section of NOH does not disclose or suggest that the VC3s are transmitted as a single SONET data stream, or that the VC3s include a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream, as would be required of NOH based on the Examiner’s interpretation of claim 59. In fact, although NOH discloses that three VC3s are connected to STM-1, NOH appears to teach away from this feature by disclosing that three separate outputs proceed from the STM-1, not a single SONET data stream (see, for example, Fig. 7A of NOH). Moreover, this section of NOH does not disclose or suggest that the STM-1 is a multiplexer or that the outputs proceeding from the STM-1 are SONET data streams. Accordingly, this section of NOH does not disclose or

suggest means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream, as recited in claim 59. Additionally, this section of NOH discloses that this configuration of NOH is clearly inefficient.

At col. 5, line 54 to col. 6, line 19, NOH discloses that a concatenated mode of SDH (SONET) tributaries such as VC-4-nC provides a container for ATM traffic. Referring to a separate and distinct embodiment, this section of NOH further discloses a pure ATM transport option in which an NE 38 carries all ATM and STM traffic as ATM cells in a single SDH (SONET) tributary. However, this section of NOH does not disclose or suggest means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream, as recited in claim 59. This section of NOH merely discloses a concatenated mode of SDH (SONET) tributaries but is silent as to whether the concatenated mode includes means for creating at least two simultaneous tributary SONET data streams. This section of NOH does not disclose or suggest that the tributaries of the concatenated mode includes a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream, as would be required of NOH based on the Examiner's interpretation of claim 59. Moreover, this section of NOH does not disclose or suggest that the NE 38 carries all ATM and STM traffic as ATM cells in more than one SDH (SONET) tributary.

Therefore, even if PIERSON were combined with NOH, such a combination could not fairly be construed to disclose or suggest means for transmitting the at least two simultaneous

tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream, as recited in claim 59. Further, even if for the sake of argument, the combination of PIERSON and NOH could fairly be construed to disclose each of the features of claim 59, a point that Applicants do not concede, Applicants assert that the reasons for combining PIERSON and NOH do not satisfy the requirements of 35 U.S.C. § 103.

For example, with respect to the reasons for combining PIERSON and NOH, the Examiner alleges (non-final Office Action, p. 5):

It would have been obvious to one of ordinary skill in the art at the time of the invention to add at least two simultaneous tributary streams of Noh to the processing of SONET transmitter of Pierson because by processing ATM cells with in VC the bandwidth utilized in transmitting and receiving the data is more efficiently utilized which will result in an improved performance. Combining the at least two simultaneous tributary streams in to the SONET transmitter would result in having a means for transmitting at least two simultaneous tributary streams which include both packet over SONET and ATM over SONET and would also result in the transmitting means for transmitting at least two simultaneous tributary SONET data streams in a single SONET data stream.

In response to similar allegations made by the Examiner in the previous non-final Office Action, Applicants submit that the Examiner's allegation is merely a conclusory statement of an alleged benefit of the combination. Such conclusory statements have been repeatedly held to be insufficient for establishing a *prima facie* case of obviousness. In this respect, Applicants rely upon KSR International Co. v. Teleflex Inc., 550 U.S. 398 (April 30, 2007) (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)), where it was held that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

Furthermore, the Examiner's allegation does not explain why one skilled in the art would change the very operation of the DTE of PIERSON to include the system of NOH. NOH

specifically disclose that the configuration of Fig. 7A of NOH, relied on by the Examiner for allegedly disclosing combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream, is clearly inefficient (col. 6, lines 61-62 of NOH). Therefore, one of ordinary skill in the art would not modify the very operation of the DTE of PIERSON to include the inefficient configuration of NOH. Moreover, the Examiner provides no explanation as to how such a modified system would even operate. The Examiner's allegations fall short of providing the articulated reasoning required by KSR. Accordingly, the Examiner has not met the initial burden of establishing a *prima facie* case of obviousness with respect to claim 59.

Further with respect to the above feature of claim 59, in the Response to Amendment section, the Examiner alleges:

The examiner disagrees with the applicant argument that the combination of references do not teach: Means for transmitting a single SONET data stream or at least two simultaneous tributary streams in a single SONET data stream. Again it should be noted that the applicant has not claimed that the POS tributary data stream and the ATM tributary data stream are two separate and independent tributary data streams which one tributary data stream only contains ATM and another tributary data stream contains POS.

(non-final Office Action, p. 18). Applicants respectfully disagree.

Claim 59 recites means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream. In response to and without acquiescing in similar allegations made by the Examiner, Applicants respectfully submit that it is unclear how one skilled in the art would reasonably interpret the POS tributary data stream, as recited in claim 59, as containing ATM data, and the

ATM tributary data stream, as recited in claim 59, as containing POS data, contrary to the Examiner's allegation.

Further with respect to the above feature of claim 59, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the applicant argument that the claim is broken into illogical portions and breaking the claim into portions is impermissible because the examiner has not treated the claim as a whole. The examiner respects the applicant right to their opinion but applicant has not met the burden required to prove that the claim was not treated as a whole. The examiner asserts that the claim was considered as a whole and was rejected using a combination of reference in a 103 rejection with a proper motivation to combine; thus, the rejection is proper.

(non-final Office Action, p. 19). Applicants respectfully disagree.

In the previous non-final Office Action and the pending non-final Office Action, the Examiner alleges that PIERSON, at Fig. 6 and col. 12, lines 50-67, discloses "means for transmitting a single SONET data stream," and relies on col. 6, lines 20-62, and col. 5, line 54 to col. 6, line 19, of NOH as allegedly disclosing "at least two simultaneous tributary streams in a single SONET data stream" (previous non-final Office Action, pp. 3-4, pending non-final Office Action, p. 4). Clearly, the Examiner breaks the above feature of claim 59 down into illogical portions and points to a section of PIERSON for allegedly disclosing several portions, and an unrelated section of NOH for allegedly disclosing another portion of claim 59. Moreover, Applicants submit again that claim 59 does not recite "means for transmitting a single SONET data stream" and "at least two simultaneous tributary streams in a single SONET data stream," as the Examiner alleges. Instead, Applicants' claim 59 specifically recites means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream.

Further with respect to the above feature of claim 59, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the combination of reference teach away from the claimed invention. Applicant has failed the burden to specifically provide evidence that teaches away from the claimed invention.

(non-final Office Action, p. 19). Applicants respectfully disagree.

Applicants note that, although NOH discloses that three VC3s are connected to STM-1, NOH appears to teach away from this feature by disclosing that three separate outputs proceed from the STM-1, not a single SONET data stream (see, for example, Fig. 7A of NOH).

Accordingly, Applicants respectfully submit that the alleged “burden to specifically provide evidence that teaches away from the claimed invention” has been met.

Further with respect to the above feature of claim 59, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the applicant argument that the Noh needs to teach: means for transmitting the at least two simultaneous tributary data streams including packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode. The combination of reference teach: means for transmitting the at least two simultaneous tributary data streams including packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode of the claimed invention as explained above.

The examiner respectfully disagrees that Noh needs to teach: tributaries of the concatenated mode includes packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream because the combination of reference teach this limitation.

(non-final Office Action, pp. 19-20). Without acquiescing in the Examiner’s allegation, Applicants submit that the sections of PIERSON, cited by the Examiner, do not disclose tributary data streams that include a packet over synchronous optical network (POS) tributary data stream, and an asynchronous transfer mode (ATM) tributary data stream. NOH does not remedy the above deficiencies in the disclosure of PIERSON. Accordingly, contrary to the Examiner’s

allegation, PIERSON and NOH, whether taken or in any reasonable combination, cannot disclose or suggest means for transmitting the at least two simultaneous tributary SONET data streams (including a packet over synchronous optical network (POS) tributary data stream and an asynchronous transfer mode (ATM) tributary data stream) as a single SONET data stream, as recited in claim 59.

Further with respect to the above feature of claim 59, in the Response to Amendment section, the Examiner alleges:

The examiner respectfully disagrees with the applicant's argument that the Noh teaching that the configuration is not efficient is relevant because applicant has not claimed the efficiency in the claim limitations.

The examiner respectfully disagrees with applicant's argument that the motivation to combine Pierson and Noh is improper. Clearly the motivation is understandable and reasonable and therefore is not improper.

The examiner respectfully disagrees with the applicant argument that the rejection is a mere conclusory statement. The examiner respects the applicant right to their opinion but applicant has not met the burden required to prove that the claim was rejected based upon a mere conclusory statement. . The examiner asserts that the claim was considered as a whole and was rejected using a combination of reference in a 103 rejection with a proper motivation to combine; thus, the rejection is proper and not conclusory.

The examiner respectfully disagrees with the applicant argument that the implementation of the combination is inefficient is even relevant because efficiency is not part of the claimed limitation. Clearly the combination is not inefficient because the ATM and POS are already in SONET together and per Pierson and Noh breaks the combination into VC3 in order to better utilize the bandwidth request.

(non-final Office Action, pp. 19-20). Applicants respectfully disagree.

In response to similar allegations by the Examiner, Applicants note that NOH specifically disclose that the configuration of Fig. 7A of NOH, relied on by the Examiner for allegedly disclosing combine the simultaneously received data streams into a single channelized synchronous optical network (SONET) data stream, is clearly inefficient (col. 6, lines 61-62 of

NOH). Applicants respectfully submit that the fact that NOH specifically discloses that the configuration relied on by the Examiner is clearly inefficient is clearly relevant to any alleged motivation to combine PIERSON with NOH. Clearly, one of ordinary skill in the art would not modify the very operation of the DTE of PIERSON to include a configuration that NOH specifically discloses as clearly inefficient. Accordingly, Applicants respectfully submit that the Examiner's allegations with respect to the combination of PIERSON with NOH are mere conclusory statement relying on impermissible hindsight.

For at least the foregoing reasons, Applicants submit that claim 59 is patentable over PIERSON and NOH. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 59 under 35 U.S.C. § 103(a) based on PIERSON and NOH.

Rejection under 35 U.S.C. § 103(a) based on PIERSON, NOH, and KREMER

Claim 47 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON in view of NOH, and further in view of KREMER. Applicants respectfully traverse this rejection.

Claim 47 depends from claim 46. Without acquiescing in the rejection of claim 46, Applicants submit that the disclosure of KREMER does not remedy the deficiencies in the disclosures of PIERSON and NOH set forth above with respect to claim 46. Claim 47 is, therefore, patentable over PIERSON, NOH, and KREMER, whether taken alone or in any reasonable combination, for at least the reasons given with respect to claim 46. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 47 under 35 U.S.C. § 103(a) based on PIERSON, NOH, and KREMER.

Rejection under 35 U.S.C. § 103(a) based on PIERSON, NOH, and VOGEL

Claims 48, 54, and 60 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON in view of NOH, and further in view of VOGEL. Applicants respectfully traverse this rejection.

Claims 48, 54, and 60 depend from claims 46, 53, and 59, respectively. Without acquiescing in the rejection of claims 48, 54, and 60, Applicants submit that the disclosure of VOGEL does not remedy the deficiencies in the disclosures of PIERSON and NOH set forth above with respect to claim 46, 53, and 59. Claims 48, 54, and 60 are, therefore, patentable over PIERSON, NOH, and VOGEL, whether taken alone or in any reasonable combination, for at least the reasons given with respect to claims 46, 53, and 59, respectively. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 48, 54, and 60 under 35 U.S.C. § 103(a) based on PIERSON, NOH, and VOGEL.

Rejection under 35 U.S.C. § 103(a) based on PIERSON, NOH, and SCHMIDT

Claims 49-52, 55-58, and 61-64 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON in view of NOH, and further in view of SCHMIDT. Applicants respectfully traverse this rejection.

Claims 49-52, claims 55-58, and claims 61-64 depend from claims 46, 53, and 59, respectively. Without acquiescing in the rejection of claims 49-52, 55-58, and 61-64, Applicants submit that the disclosure of SCHMIDT does not remedy the deficiencies in the disclosures of PIERSON and NOH set forth above with respect to claims 46, 53, and 59. Claims 49-52, 55-58, and 61-64 are, therefore, patentable over PIERSON, NOH, and SCHMIDT, whether taken alone or in any reasonable combination, for at least the reasons given with respect to claims 46, 53, and 59, respectively. Accordingly, Applicants respectfully request reconsideration and withdrawal of

the rejection of claims 49-52, 55-58, and 61-64 under 35 U.S.C. § 103(a) based on PIERSON, NOH, and SCHMIDT.

Rejection under 35 U.S.C. § 103(a) based on PIERSON and STEPHENSON

Claim 65 stands rejected under 35 U.S.C. § 103(a) as allegedly anticipated by PIERSON in view of STEPHENSON. Applicants respectfully traverse this rejection.

Independent claim 65 recites features similar to (yet possibly of different scope than) features described above with respect to claim 59. Without acquiescing in this rejection, Applicants submit that the disclosure of STEPHENSON does not remedy the deficiencies in the disclosure of PIERSON set forth above with respect to claims 59. Therefore, Applicants submit that claim 65 is patentable over PIERSON and STEPHENSON, whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claim 59. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 65 under 35 U.S.C. § 103(a) based on PIERSON and STEPHENSON.

Rejection under 35 U.S.C. § 103(a) based on PIERSON, STEPHENSON, and KREMER

Claim 66 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON, in view of STEPHENSON, and further in view of KREMER. Applicants respectfully traverse this rejection.

Claim 66 depends from claim 65. Without acquiescing in the rejection of claim 66, Applicants submit that the disclosure of KREMER does not remedy the deficiencies in the disclosures of PIERSON and STEPHENSON set forth above with respect to claim 65. Claim 66 is, therefore, patentable over PIERSON, STEPHENSON, and KREMER, whether taken alone or in any reasonable combination, for at least the reasons given with respect to claim 65.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 66 under 35 U.S.C. § 103(a) based on PIERSON, STEPHENSON, and KREMER.

Rejection under 35 U.S.C. § 103(a) based on PIERSON, STEPHENSON, and SCHMIDT

Claims 67-69 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over PIERSON in view of STEPHENSON, and further in view of SCHMIDT. Applicants respectfully traverse this rejection.

Claims 67-69 depend from claim 65. Without acquiescing in the rejection of claims 67-69, Applicants submit that the disclosure of SCHMIDT does not remedy the deficiencies in the disclosures of PIERSON and STEPHENSON set forth above with respect to claim 65. Claims 67-69 are, therefore, patentable over PIERSON, STEPHENSON, and SCHMIDT, whether taken alone or in any reasonable combination, for at least the reasons given with respect to claim 65. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 67-69 under 35 U.S.C. § 103(a) based on PIERSON, STEPHENSON, and SCHMIDT.

Conclusion

In view of the foregoing amendment and remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such assertions (e.g., whether a reference constitutes prior art, reasons to modify a reference and/or combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,
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